

WORK PERMIT # _____

ILR / Work Order # _____ Dept. _____ Construction Job # _____ Tracking # 07H 650 Account # 89195

Work requester fills out this section

Requester: Collins Date: 8-13-98 Dept/Div/Group: PHENIX
 Other Contact person (if different from requester): KEM JONES Phone No. 6056
 Start Date 8-17-98 Estimated End Date _____
 Description of Work / Problem: _____

REMOVE TOP (2 SECTIONS) OF TENT

Building 832 Room HALLWAY Equipment _____

2. Work requester, work provider, and ES&H (as necessary) jointly fill out this section or attach applicable hazard analysis

Hazard Analysis

RADIATION CONCERNS NONE Activation Airborne Contamination Radiation OTHER _____
 Special nuclear materials involved (ES&H 3.7.0), notify Group Leader, Isotope Special Materials Group (SSD)
 Fissionable materials involved (ES&H 3.7.0), notify Laboratory Criticality Officer (DAT)

SAFETY CONCERNS NONE Corrosive Flammable Material Handling Rigging/Critical Lift
 Asbestos Cryogenic Fumes/Mist/Dust Noise Toxic
 Biohazard Electrical Heat/Cold Stress Non-ionizing Radiation Vacuum
 Chemicals Elevated Work Hydraulic Oxygen Deficiency OTHER _____
 Confined Space Excavation Lasers Penetrating Fire Wall
 Adding / Removing Walls or Roofs Lead Pneumatic

ENVIRONMENTAL CONCERNS

NONE OTHER _____
 Hazardous materials will be released to the air via a new/modified ventilation system, hood, or stack (ES&H 6.1.4 and 6.1.5) Notify Project Engineer, Environmental Protection Office (ES&H Services)
 New hazardous materials will be released via the liquid effluent system to the sewage treatment system or an impoundment (ES&H 6.1.2) Notify Regulatory Compliance Engineer, Environmental Protection Office (ES&H Services) for permit.

Waste Generated NONE Clean Waste Hazardous Waste Radioactive Waste Mixed Waste
 Waste disposition by: _____

Based on analysis above, the Review Team determines the job hazard category:

JOB HAZARD CATEGORY: MODERATE HIGH
 Job Safety Analysis (JSA) Required? No Yes (Please attach)

Work Controls

WORK PRACTICES NONE Containment IH Survey Scaffolding - requires inspection
 Back-up Person/Watch Exhaust Ventilation Lockout/Tagout Time Limitation
 Barricades HP Coverage Posting/Warning Signs OTHER _____

PROTECTIVE EQUIPMENT NONE Ear Plugs Gloves Lab Coat Safety Glasses
 Coveralls Ear Muffs Goggles Respirator Safety Harness
 Disposable Clothing Face Shield Hard Hat Rubbers Safety Shoes OTHER _____

PERMITS REQUIRED *Initial next to box to show who has responsibility to generate the permit*
 Confined Space Entry (ES&H 2.2.4) Digging/Core Drilling (ES&H 1.18.0) Impair Fire Protection Sys. (ES&H 4.2.0)
 Cutting/Welding (ES&H 4.3.0) Electrical Working Hot (ES&H 1.5.0) Rad Work Permit (BNL RadCon Manual)
 Dept/Div Specific Permit _____ Dept/Div Specific Permit _____

DOSIMETRY/ MONITORING NONE O₂/Combustible Gas Self-reading Dosimeter
 Heat Stress Monitor Passive Vapor Monitor Sorbent Tube/Filter Pump
 Noise Survey/Dosimeter Real Time Monitor TLD OTHER _____

Training Requirements (List below any location specific training requirements)

3. Both work requester and work provider coordinate on work plan (use attachments for detailed plans)

Work Plan (procedures, timing, personnel, etc.): _____

SKILL OF CRAFT -

DETECTON TO BE COVERED W 4 SHEETS OF
PLY WOOD OVER UNISTROT FOR 'DROP'
PROTECTION -

Special Working Conditions Required: _____

Operational Limits Imposed: _____

Post Work Testing Required: _____

Reviewed By: *Note: Primary facility reviewer will dictate the other required signatures

Title	Name (print)	Signature	Life #	Date
Primary Reviewer	J. Collins		14795	8-13-98
ES&H Services	STEVE KMB		19894	8/14/98
Other *	A. STALMASCHUK		15774	

4. Job site personnel fills out this section

Note: Signature indicates personnel performing work have read and understand the hazards and permit requirements

Job Site Supervisor _____ Contractor Supervisor _____

Workers:	Life #	Workers:	Life #
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

5. Work Requester or designee fills out this section

Conditions are Appropriate to Start Work: (Work permit has been reviewed, work controls are in place, and site is ready for job.)

Name _____ Signature _____ Life # _____ Date _____

6. Work Requester determines if Post Job Review is required

YES NO

Post Job Review by ES&H Coordinator: _____ Life #: _____ Date: _____

Name	Initial	Life #	Date
Other Closeout Signatures (as necessary): _____	_____	_____	_____
Other Closeout Signatures (as necessary): _____	_____	_____	_____

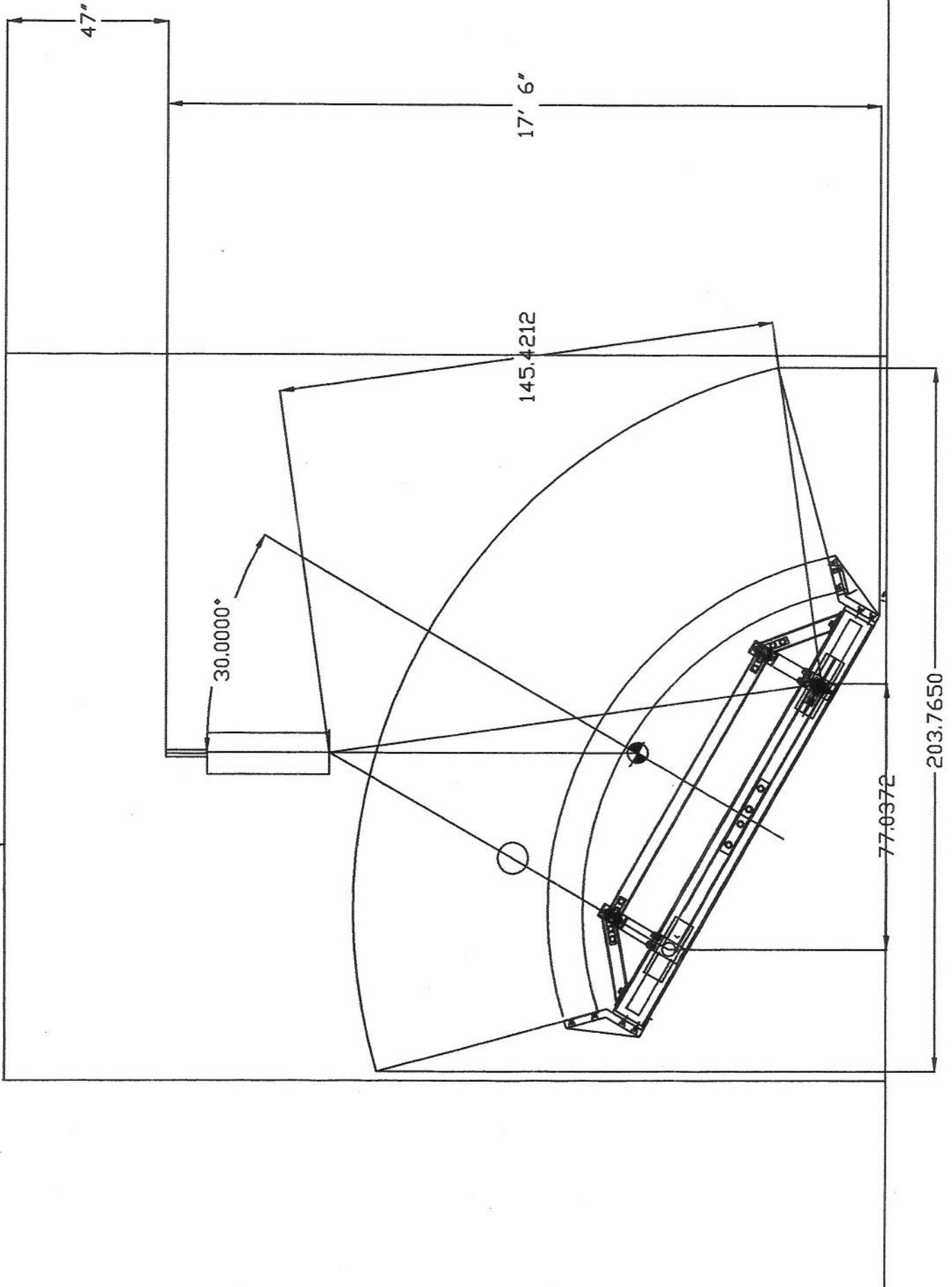
7. Worker provides feedback

Worker Feedback:

Supervisor: Is worker feedback required on this job? NO YES (attach feedback form)

Worker: Any feedback on safety concerns or on ways to improve the job? NO YES (ask for form if not attached)

DOOR FRAME

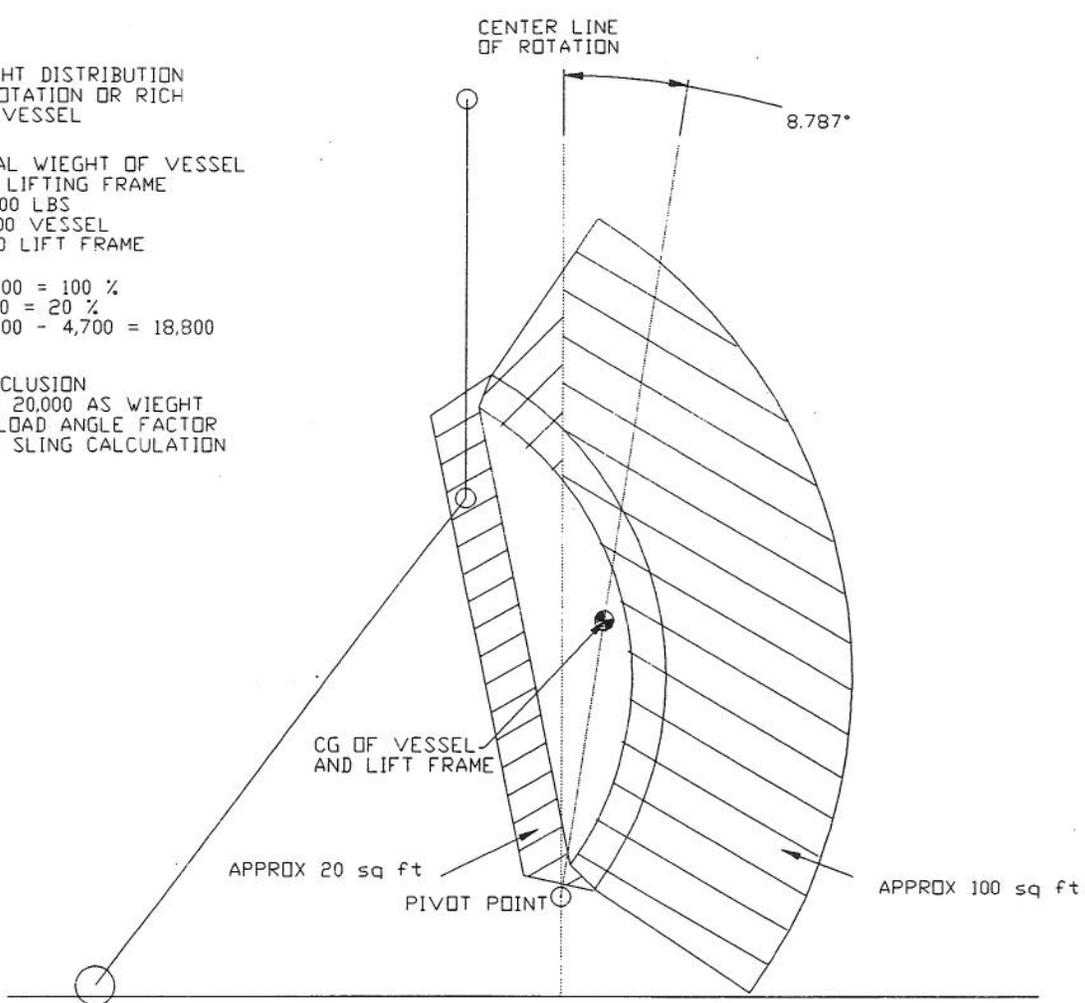


WIEGHT DISTRIBUTION
IN ROTATION OR RICH
GAS VESSEL

TOTAL WIEGHT OF VESSEL
AND LIFTING FRAME
23,500 LBS
20,000 VESSEL
3,500 LIFT FRAME

23,500 = 100 %
4,700 = 20 %
23,500 - 4,700 = 18,800

CONCLUSION
USE 20,000 AS WIEGHT
IN LOAD ANGLE FACTOR
FOR SLING CALCULATION



LAF = LOAD ANGLE FACTOR (LAF) = $12 / 10.3 = 1.16$
 WEIGHT X LAF = TOTAL STRESS = $20,000 \times 1.2 = 24,000$
 TOTAL STRESS / NUMBER OF SLINGS = STRESS PER SLING
 $24,000 / 2 = 12,000$ LBS
 STRESS ON CHAIN FALL 24,000

